

WHAT IS CLAIMED IS:

1. A method of manufacturing an image display apparatus, comprising

5 a step of seal-bonding a first member having an electron-emitting device and a second member having a phosphor which is irradiated with an electron emitted from the electron-emitting device to emit light in a seal bonding chamber in which a vacuum atmosphere is realized,

10 wherein a step for aging the electron-emitting device is performed before the step of seal-bonding.

2. A method according to claim 1, wherein, after the aging step is performed, without exposing the
15 electron-emitting device to an external environment, the step of seal-bonding is performed.

3. A method according to claim 1, wherein the aging step is performed under a condition that a
20 pressure of not more than 1×10^{-4} Pa is set in a region where the electron-emitting device exists

4. A method according to claim 3, wherein, after the aging step is performed, a pressure of
25 substantially not more than 1×10^{-4} Pa is maintained in the region where the electron-emitting device exists until an isolated space is formed between the first and

09350744.092441
T04250" 44.092441

second members in the seal bonding step.

5 5. A method according to claim 1, wherein the aging step is performed while a partial pressure of an organic substance in the region where the electron-emitting device exists is set at not more than 1×10^{-6} Pa.

10 6. A method according to claim 5, wherein, after the aging step is performed, a partial pressure of an organic substance in the region where the electron-emitting device exists is maintained at substantially not more than 1×10^{-6} Pa until an isolated space is formed between the first and second
15 members in the seal bonding step.

20 7. A method according to claim 1, wherein the aging step comprises the step of applying a voltage to the electron-emitting device.

25 8. A method according to claim 7, wherein, in the step of applying the voltage, a value of the voltage is larger than a normal driving voltage value applied to the electron-emitting device at an image display operation.

9. A method according to claim 7, wherein the

03950744-09401
T04260-44209660

aging step comprises the step of causing the electron-emitting device to emit an electron.

10. A method according to claim 1, further
5 comprising the panel getter step performed between the aging step and the seal bonding step.

11. A method according to claim 1, further
10 comprising the electron beam cleaning step conducted before the aging step.

12. A method of manufacturing an image display apparatus, comprising
15 the step of seal-bonding a first member having a plurality of electron-emitting devices and a second member having a phosphor which is irradiated with an electron emitted from the electron-emitting device to emit light in a seal bonding chamber in which a vacuum atmosphere is realized,

20 wherein, before the step of seal-bonding, the characteristic adjustment step of selectively adjusting characteristics of the plurality of electron-emitting devices is performed.

25 13. A method according to claim 12, wherein, after the characteristic adjustment step is performed, without exposing the electron-emitting device to the

0950744-092404

atmosphere, the step of seal-bonding is performed.

14. A method according to claim 12, wherein the characteristic adjustment step is performed under a condition that while a partial pressure of an organic substance in the region where the electron-emitting device exists is set at not more than 1×10^{-6} Pa.

15. A method according to claim 12, wherein, the characteristic adjustment step comprises the step of applying a voltage to the electron-emitting device.

16. A method according to claim 15, wherein in the step of applying the voltage, a value of the voltage is larger than a normal driving voltage value applied to the electron-emitting device at an image display operation.

17. A method according to claim 15, wherein the characteristic adjustment step comprises the step of causing the electron-emitting device to emit an electron.

18. A method according to claim 12, further comprising the panel getter step performed between the characteristic adjustment step and the seal bonding step.

19. A method according to claim 12, further comprising the electron beam cleaning step performed before the characteristic adjustment step.

5 20. A method of manufacturing an image display apparatus, comprising

 a step of seal-bonding a first member having an electron-emitting device and a second member having a phosphor which is irradiated with an electron emitted
10 from the electron-emitting device to emit light in a seal bonding chamber in which a vacuum atmosphere is realized,

 wherein before the step of seal-bonding, the voltage application step of applying a voltage to the
15 electron-emitting device subjected to the activation step is performed.

21. A method of manufacturing an image display apparatus, comprising

20 the step of seal-bonding a first member having an electron-emitting device and a second member having a phosphor which is irradiated with an electron emitted from the electron-emitting device to emit light in a seal bonding chamber in which a vacuum atmosphere is
25 realized,

 wherein, before the step of seal-bonding, the voltage application step of applying a voltage to the

0950744-0950

electron-emitting device having carbon and/or a carbon compound at electron-emitting portion and/or near an electron-emitting portion is performed.

5 22. A method according to claim 20, wherein, after the voltage application step is performed, without exposing the electron-emitting device to the atmosphere, the step of seal-bonding is performed.

10 23. A method according to claim 20, wherein the voltage application step is performed under a condition that a partial pressure of an organic substance in the region where the electron-emitting device exists is set at not more than 1×10^{-6} Pa.

15 24. A method according to claim 20, wherein, in the voltage application step, a value of the voltage is larger than a normal driving voltage value applied to the electron-emitting device at an image display
20 operation.

 25. A method according to claim 20, wherein the voltage application step comprises the step of causing the electron-emitting device to emit an electron.

25 26. A method according to claim 20, further comprising the panel getter step performed between the

09560744-0944
F04260-44209560

voltage application step and the seal bonding step.

27. A method according to claim 20, further
comprising the electron beam cleaning step performed
5 before the voltage application step.

28. A method of manufacturing an image display
apparatus, comprising

10 the step of seal-bonding a first member having an
electron-emitting device and a second member having a
phosphor which is irradiated with an electron emitted
from the electron-emitting device to emit light in a
seal bonding chamber in which a vacuum atmosphere is
realized,

15 wherein, before the step of seal-bonding, the
voltage application step of applying, to the
electron-emitting device, a voltage having a voltage
value larger than a normal driving voltage value
applied to the electron-emitting device at an image
20 display operation is performed.

29. A method according to claim 28, further
comprising the panel getter step performed between the
voltage application step and the seal bonding step.
25

30. A method according to claim 28, further
comprising the electron beam cleaning step performed
before the voltage application step voltage.